DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed July 29, 2009. Claims 1-49 are pending in this application. Claims 39-49 have been withdrawn as a result of a restriction election. Applicant is reminded to cancel claims 39-49 upon allowance of this application.

Interview Summary

Examiner contacted Applicant's representative on September 17, 2009 and again on October 21, 2009 in an effort to expedite the prosecution. However, Applicant did not return any of Examiner's phone calls.

Specification

The cross-reference to related application numbers (see specifications pages 1 and 2) must be filled.

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Claim Rejections - 35 USC § 112

The PTO thanks applicant for the clarification in the previous rejection. The 112 rejection, under second paragraph is now withdrawn.

Claim Rejections - 35 USC § 101

Applicant has amended claims 1-13 to recite a computer program product stored on a computer-readable medium to overcome the 35 USC § 101 rejection. While the "computer-readable medium" is mentioned in the specification (page 35, line 27), it is not explicitly defined. It is highly suggested that the claims be amended to recite "computer- **storage** medium" in order to clarify any ambiguity. See specification, page 36, lines 14-16.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-14, 16-27, 29, and 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,681,232 issued to Sistanizadeh et al in view of USPN 7,133,403 issued to Mo et al.

Sistanizadeh et al. combined with Mo et al. teach claims:

1. An optical service agent (Sistanizadeh: col. 8, lines 27-33) for managing communication services for a user in an optical communication system in which the user lacks at least some network information related to the services, the optical service agent comprising:

a user-to-network interface (UNI) (Sistanizadeh: abstract: user interface) for interfacing with an optical communication network (Sistanizadeh: abstract: "IP-Over Ethernet on fiber networks;" col. 3, lines 33-51: optical fiber access ring interconnecting switches) including signaling to a network device having network information related to the communication services (Sistanizadeh: col. 3, lines 18-33; col. 9, lines 37-39), including network topological information (Sistanizadeh: col.2, lines 36-67; col. 3, lines 18-30), to cause the network device to signal an indication of group membership to other devices in communication with the optical communication network (Sistanizadeh: col. 14, lines 6-18: advertising routes to peers on the internet); and optical service logic for obtaining a new optical communication path from the optical communication network via the network device by signaling through the UNI, the network device selecting the communication path based at least in-part on the user network or application requirement and the network information related to the communication services and managing said optical communication path for the user (Sistanizadeh: col. 18, lines 17-35; fig.4; "Summit48 supports OSPF (Open Shortest Path First). OSPF is a routing protocol that determines the best path for routing IP traffic over a TCP/IP network." Col. Col. 27, lines 16-31, “In the example of FIGS. 3 and 4, the latency agent 127 performs trace route operations on one leg going from its location at the M-POP switch 43 to

each of the G-POP switches 73, 75 within the same region 90 (see FIG. 3). For this purpose, the latency agent 127 would launch ICMP queries addressed to the switches 73, 75 at the boundary of that regional network. The agent 127 determines the path based on addresses of the switches along the path that respond and determines the latencies for each hop, of the legs going to the G-POP switches around the backbone distribution ring 50. The same latency agent launches ICMP queries to customer equipment 31 at the various customer locations served through the access ring 30, to perform trace route operations on each second leg going from its location to a respective customer location. The agent 127 determines path and the latencies for each hop, of the legs going to the customer equipment around the access ring 30. ").

However, Sistanizadeh does not explicitly teach managing said optical communication path for the user without exposing the network topological information to the user, whereby the user need not have the network information in order to obtain a new optical communication path.

In an analogous art, Mo teaches managing optical communication path for the user without exposing the network topological information to the user whereby the user need not have the network information in order to obtain a new optical communication path (Mo: col. 3, lines 3-13). At the time the invention was made, one of ordinary skill in the art would have been motivated to manage communication path for users without exposing the network topological information to the user in order to prevent cross contamination and intrusions between users and the network system (Mo: col. 3, lines 9-13).

3. The optical service agent of claim 1, further comprising auto-discovery logic for automatically discovering peer users (Sistanizadeh: col. 14, lines 6-18: advertising routes to peers on the internet).

4. The optical service agent of claim 3, wherein the auto-discovery logic comprises an advertisement mechanism for sending and receiving peer information (Sistanizadeh: col. 14, lines 6-18: advertising routes to peers on the internet).

5. The optical service agent of claim 4, further comprising a peer database for storing peer information (Sistanizadeh: co1.14, lines 6-36)

6. The optical service agent of claim 1, further comprising peer authentication logic for authenticating peer users (Sistanizadeh: fig. 11, peer authenticating logic peer users 187, 90, 135, 133).

7. The optical service agent of claim 1, further comprising peer-to-peer signaling logic for communicating with peer users (Sistanizadeh: fig. 11; col. 14, lines 6-36).

8. The optical service agent of claim 7, wherein the optical service logic coordinates communication services with peer users via the peer-to-peer signaling logic (Sistanizadeh: fig. 11).

9. The optical service agent of claim 1, wherein the optical service agent comprises an application component and a network component (Sistanizadeh: col. 35, lines 16-33 - "The system 351 also includes one or more input/output interfaces for communications, shown by way of example as an interface 359 for data communications via the LAN at the NOC 135, and from that LAN to the out-of-band signaling network and preferably to the production network. The interface 259 could include a modem for telnet sessions, but preferably comprises one or more network interface cards, such as Ethernet cards. The communication interface 359 may include virtually any other appropriate data communications device. The physical communication links may be optical, wired, or wireless (e.g., via satellite or cellular network). In accord with aspects of the invention, the computer system 351 connects to a local area network, for communication with other operations support systems, such as the web server 111 and the order manager 147, at one of the NOC locations 135. Through the LAN and/or another interface card, the system 107 also has communications connectivity both to the production network (for SNMP communications and the like) and to the NOC router for the out-of-band (OOB) communications.").

10. The optical service agent of claim 9, wherein the application component and the network component are situated within the user, and wherein the network component implements the UNI for interfacing with the optical communication network (Sistanizadeh: figure 12: 351).

11. The optical service agent of claim 9, wherein the application component is situated within the user and the network component is situated within the optical communication network, and wherein the application component and the network component communicate via the UNI (Sistanizadeh: figure 12: 351).

12. The optical service agent of claim 9, wherein the application component and the network component communicate via a control interface, and wherein the network component interfaces with the optical communication network via the UNI as a proxy for the application component (Sistanizadeh: figures 1 and 2).

13. The optical service agent of claim 1, further comprising an application program, interface (API) for interfacing with a user application (Sistanizadeh: figure 1: 113).

Claims 14 and 16-25 are similarly rejected as in claims 1 and 3-13.

Claim 26 is similar to claim 1, therefore is rejected under the same rationale. Claim 26 furthermore recites a controller for providing optical communication services. The element is taught by Sistanizadeh in col. 35, lines 16-33

27. The apparatus of claim 26, wherein the optical service agent implements a user-to-network interface (UNI) for interfacing with the controller (Sistanizadeh: abstract: user interface).

Claim 29 is similarly rejected as in claim 1.

Claims 31-33 are similarly rejected as in claims 10-12.

34. The system of claim 29, further comprising a second network user coupled to the optical communication network, said second network user comprising a second optical service agent (Sistanizadeh: figure 3).

35. The system of claim 34, wherein each of said optical service agents comprises autodiscovery logic for automatically discovering the other of said optical service agents (Sistanizadeh: col. 14, lines 6-18: advertising routes to peers on the internet).

36. The system of claim 34, wherein each of said optical service agents comprises peer authentication logic for authenticating the other of said optical service agents (Sistanizadeh: fig. 11, peer authenticating logic peer users 187, 90, 135, 133).

37. The system of claim 34, wherein each of said optical service agents comprises peer-to-peer signaling logic for coordinating communication services with the other of said optical service agents (Sistanizadeh: col. 14, lines 6-18: advertising routes to peers on the internet).

38. The system of claim 29, further comprising a second network user coupled to the optical communication network, said second network user excluding an optical service agent (Sistanizadeh: figure 4).

Claims 2, 15 and 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,681,232 issued to Sistanizadeh et al in view of USPN 7,133,403 issued to Mo et al. in further view of USPN 7,095,956 issued to Levandovsky et al.

Sistanizadeh et al. combined with Mo et al. and Levandovsky et al. teach claims: 2, 15, 28 and 30. Neither Sistanizadeh nor Mo teaches wherein the optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. However, this feature is known in the art as evidenced by Levandovsky (col. 1, lines 35-42). at the time the invention was made, one of ordinary skill in the art would have been motivated to employ ASON because by definition, ASON is divided into sub-networks, and within these networks,

paths are capable of delivering acceptable quality of service, thereby reducing undesirable optical transmission impairments (Levandovsky: col. 1, lines 35-42).

Response to Arguments

Applicant's argument to the 112 rejection in the previous office action has been found persuasive.

However, upon further reconsideration, the PTO hereby reargues that issues addressed in Applicant's amendment dated May 22, 2008 as well as Applicant's arguments in the pre-appeal brief conference request dated April 29, 2009.

Applicant argues that the cited combination is improper because (a) there cannot be a motivation to combine where the combination defeats the operation of the teaching; and (b) the combination does not actually yield the claimed invention. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

(a) the combination of Sistanizadeh and Mo does not defeat the operation of the teaching. The claims recites in part: "... and managing said optical communication path for the user ***without exposing*** the network topological information to the user." Support for this limitation is found in the specification, page 22, lines 8-14 which recites:

> "The hybrid/proxy architecture is similar to the distributed flooding architecture, and therefore has many of the same advantageous and disadvantageous characteristics as the distributed flooding architecture. However, because the OSS rather than the OSA-N floods the advertisement,

the OSS does not need to ***"leak"*** topological information to the OSA-enabled user. Therefore, there is no confusion of the separation between the NNI and the UNI."

It is clear from the disclosure that by not ***exposing,*** the network topological information is in fact not ***leaked*** to users. The term "leak" implies that something is unintentionally disclosed or unauthorized. As admitted by Applicant in the response filed July 29, 2009, the term "leak" is that when the LSA and neighbor database is maintained in the user domain to potentially subject to *unauthorized* examination by enterprise personnel. Sistanizadeh however, teaches a service level manager (SLM) that offers a web server type user interface. This interface offers access to technical personnel and customers (col. 2, lines 48-52).

Sistanizadeh, col. 18, lines 9-47, teaches "Essentially, the SLM application plane 150 sits on top of the network plane 10 (FIG. 7). The ***application has an understanding of the network topology***. The SLM application plane 150 collects data from various agents in the agent plane 170, and it populates one or more databases with collected information about network operations. The SLM application plane 150 has the business logic that works on the database, and ***through its user interface provides requested*** **information about the health of the network to customers and to network operations staff**."

A careful read of Sistanizadeh clearly states that the information provided to the customers by the interface the health information of the network. Furthermore, the

interface interacts with the users, for example, to increase customer's bandwidth upon request. Although it understands the network topology, the SLM does not explicitly expose or "leak" the topology to the users. Therefore, the user does not necessarily need to know the network topological information. Furthermore, if one of ordinary skill in the art were to configure the system to shield the information so that the user cannot see the network topological at all, it would not make Sistanizadeh's system in operable because the system can still interact with the agents to collect topological information and at the same time provide only requested information to users without exposing the networks topology.

(b) the combination does yield the claimed invention:

In view of Supreme Court Decision in KRS International Co. v. Teleflex Inc., 550 U.S. -, 82 USPQ2d 11385 (2007), the Supreme Court stated that the Federal Circuit erred when it applied the well-known teaching-suggestion-motivation (TSM) test in an overly rigid and formalistic way. According to the Supreme Court, the TSM test is one of a number of valid rationales that could be used to determine obviousness. It is ***not*** the only rationale that may be relied upon to support a conclusion of obviousness.

In response to applicant's argument that there is no motivation to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Sistanizadeh does not explicitly teach managing said optical communication path for the user without exposing the network topological information to the user, whereby the user need not have the network information in order to obtain a new optical communication path. In an analogous art, Mo teaches managing optical communication path for the user without exposing the network topological information to the user whereby the user need not have the network information in order to obtain a new optical communication path (Mo: col. 3, lines 3-13). At the time the invention was made, one of ordinary skill in the art would have been motivated to manage communication path for users without exposing the network topological information to the user in order to prevent cross contamination and intrusions between users and the network system (Mo: col. 3, lines 9-13).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALINA N. BOUTAH whose telephone number is (571)272-3908. The examiner can normally be reached on Monday-Thursday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L.M. Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alina N Boutah/

Examiner, Art Unit 2143